

In the Claims:

1. (Currently amended) ~~The invention relates to a~~ A layer system that filters sun and heat and can be applied to glass by means of a vacuum coating process, said system comprising ~~at least one series of metal layers in addition to a respective series of lower dielectric layers that are positioned directly below said assembly and a respective series of upper dielectric layers that are positioned directly above said assembly, characterised in that~~ at least one metal layer system (4) ~~as well as one~~ sandwiched between an upper (2) and ~~one~~ a lower (3) dielectric layer system are configured as a sandwich system in which, within the metal layer system (4), a metal layer (8) ~~consisting of~~ comprising at least one individual layer is encapsulated by an upper (9) and a lower (7) intermediate layer ~~consisting of the~~ comprising a hypostoichiometrically nitrated or oxidised metal of the metal layer (8) and in which the lower (3) as well as the upper (2) dielectric layer system has a stoichiometric layer (5, 11) of a metal or semiconductor oxide or metal or semiconductor nitride as well as at least one further hypostoichiometric layer (6, 10) of ~~the a~~ the same metal or semiconductor oxide or metal or semiconductor nitride ~~whereby~~ wherein within the dielectric layer systems (2, 3), the ~~coatings layers~~ coatings layers are positioned in such a way that in comparison to ~~the a~~ a neighbouring layer, the layer with the greater oxygen or nitrogen deficit of the metal or semiconductor oxide or metal or semiconductor nitride always lies on ~~the a~~ a side turned towards the metal layer (8).
2. (Currently amended) ~~Thermally treatable~~ The layer system that filters sun and heat according to Claim 1, ~~characterised in that the~~ wherein an oxygen or nitrogen portion within ~~a the~~ a sandwich system is designed as a gradient.
3. (Currently amended) ~~Thermally treatable~~ The layer system that filters sun and heat according to Claim 1 ~~or 2, characterised in that the~~ wherein a dielectric of the dielectric layer systems (2, 3) ~~is~~ comprises a nitride, oxide or oxynitride of silicon.
4. (Currently amended) ~~Thermally treatable~~ The layer system that filters sun and heat according to Claim 1 ~~or 2 characterised in that the~~ wherein a dielectric of the dielectric layer systems (2, 3) ~~is~~ comprises a nitride or oxide of a metal or semiconductor

~~whereby the~~ wherein a refractive index of ~~this said~~ nitride or oxide is more highly refractive in comparison with ~~that a refractive index of the~~ silicon nitride.

5. (Currently amended) ~~Thermally treatable~~ The layer system that filters sun and heat according to Claim 4, ~~characterised in that~~ wherein the dielectric of the dielectric layer systems (2, 3) ~~is composed of~~ comprises a nitride or oxide of a metal or semiconductor that has a refractive index in the range of approx. 2.0 to 2.7 measured at a wavelength of 550nm.

6. (Currently amended) ~~Thermally treatable~~ The layer system that filters sun and heat according to ~~one of Claims Claim 1 to 5~~ characterised in that wherein the metal layer (8) ~~is composed of~~ comprises a Ni:Cr alloy.

7. (Currently amended) ~~Thermally treatable~~ The layer system that filters sun and heat according to ~~one of Claims Claim 1 to 5~~ characterised in that wherein the metal layer (8) ~~is composed of~~ comprises chrome.

8. (Currently amended) ~~Thermally treatable~~ The layer system that filters sun and heat according to ~~one of the Claims Claim 1 to 5~~ characterised in that wherein the metal layer (8) ~~is composed of~~ comprises at least three individual layers of a metal that has electric conductivity in ~~the~~ a magnitude of 10^7 s/m.

9. (Currently amended) ~~Thermally treatable~~ The layer system that filters sun and heat according to Claim 8 ~~characterised in that the~~ wherein a middle individual layer of the metal layer (8) has an electric conductivity of approximately $6 * 10^7$ S/m.

10. (Currently amended) ~~Thermally treatable~~ The layer system that filters sun and heat according to ~~one of Claims Claim 8 or 9~~ characterised in that wherein the layer system has at least one further metal layer system with one further adjacent dielectric layer system ~~so that both assemblies which~~ constitute a periodic continuation of the an assembly sequence of the lower and upper dielectric layer systems (2, 3) and the metal layer system (4).

11. (Currently amended) ~~Thermally treatable~~ The layer system that filters sun and heat according to ~~one of Claims Claim 6 or 7, characterised in that wherein the~~ stoichiometric layer of the upper (2) and the lower (3) dielectric layer systems encompasses/comprises a stoichiometric silicon nitride layer with a thickness of approximately 5.0 nm to 200.0 nm (50Å to 2000 Å) and ~~the a thickness of the at least one~~ further hypostoichiometric silicon nitride layer[[s]] of every dielectric layer system (2,3) amounts to approx. 5.0 nm to 50.0 nm (50Å to 500Å) in total, ~~that and the metal layer (8)~~ has a thickness of approx. 1.0 nm to 100.0 nm (10Å to 1000Å) and every intermediate ~~coating (7,9)~~ layer has a thickness of approx. 1.5 nm to 20.0nm (15Å to 200Å).

12. (Currently amended) ~~Thermally treatable~~ The layer system that filters sun and heat according to Claim 8 ~~characterised in that the wherein~~ layer thicknesses of the available intermediate layers (7,9) respectively above and below the metal layer (8) and/or ~~the available dielectric layer systems (2,3)~~ respectively above and below the metal layer are identical.

13. (Currently amended) ~~Thermally treatable~~ The layer system that filters sun and heat according to ~~one of Claims Claim 1 to 12, characterised in that wherein~~ at least one hypostoichiometric layer of the dielectric layer systems (2,3) has such an oxygen or nitrogen deficiency that ~~the an~~ extinction coefficient of this said hypostoichiometric layer lies in ~~the a~~ range between $1 \cdot 10^{-2}$ to $1 \cdot 10^{-3}$.

14. (Currently amended) ~~Thermally treatable~~ The layer system that filters sun and heat according to Claim 13 ~~characterised in that wherein~~ at least one hypostoichiometric layer of the dielectric layer systems (2,3) ~~exhibit~~ has such a an oxygen or nitrogen deficiency that the extinction coefficient of this said hypostoichiometric layer lies in ~~the a~~ range between $2 \cdot 10^{-3}$ to $3 \cdot 10^{-3}$.

15. (Currently amended) ~~Method~~ A method for ~~the~~ manufacture of a thermally treatable layer system that filters sun and heat according to Claim 1 in which ~~the~~

individual layers are applied one after ~~the~~an other to a glass substrate by means of a vacuum coating ~~characterised in that wherein~~ at least one of the oxide or nitride layers ~~are~~ is applied in a reactive vacuum coating process from a metallic or semiconductive coating source and in ~~the~~ presence of oxygen or nitrogen as a reactive gas.

16. (Currently amended) ~~Method~~ A method for ~~the~~ manufacture of a thermally treatable layer system that filters sun and heat according to Claim 1 in which ~~the~~ individual layers are applied one after ~~the~~an other to a glass substrate by means of a vacuum coating ~~characterised in that wherein~~ at least one of the oxide or nitride layers ~~are~~ is applied in a nonreactive or partially reactive vacuum coating process from a coating source which is composed of the stoichiometric or hypostoichiometric oxide or nitride of ~~the~~ material of the sandwich system and ~~thereby wherein~~ no or only small amounts of oxygen or nitrogen are added to ~~the~~a working gas during the coating process.

17. (Currently amended) ~~Method~~ The method for ~~the~~ manufacture of a thermally treatable layer system that filters sun and heat according to Claim 16, ~~characterised in that wherein~~ oxygen or nitrogen with a volume content of less than 10% of ~~the~~a volume of the working gas is added to the working gas during the coating process.

18. (Currently amended) ~~Method~~ A method for ~~the~~ manufacture of a thermally treatable layer system that filters sun and heat according to Claim 3 ~~according to one of Claims 15 or 16, characterised in that the wherein~~ extraction of at least one of the dielectric layer systems (~~2 or 3~~) is carried out from a coating source containing primarily silicon which has an aluminium content of approximately 5 to 15%.

19. (Currently amended) ~~Method~~ A method for ~~the~~ manufacture of a thermally treatable layer system that filters sun and heat according to Claim 3 ~~according to one of Claims 15 or 16, characterised in that the wherein~~ extraction of at least one of the dielectric layer systems (~~2 or 3~~) is carried out from a coating source containing primarily silicon which has doping that increases ~~the~~ electric conductivity of the silicon coating source.

20. (Currently amended) ~~Method~~ The method for the manufacture of a thermally treatable layer system that filters sun and heat according to Claim 19, ~~characterised in that wherein~~ the extraction of at least one of the dielectric layer systems (2 or 3) is carried out from a coating source containing primarily silicon that has boron doping.

21. (Currently amended) ~~Method~~ The method for the manufacture of a thermally treatable layer system that filters sun and heat according to Claim 19, ~~characterised in that wherein~~ the extraction of at least one of the dielectric layer systems (2 or 3) is carried out from a coating source containing primarily silicon which has carbon doping.